

FORM PTO-1449	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. NIH142.1CDV1	APPLICATION NO. Unknown
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		10/729,027	
(USE SEVERAL SHEETS IF NECESSARY)		APPLICANT Gu, et al.	
		FILING DATE Herewith 12/05/2003	GROUP Unknown 1645

U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE (IF APPROPRIATE)
KSS	1.	5,013,661	05/07/91	Munford, et al			
	2.	5,334,379	08/02/94	Pillai, et al.			
	3.	5,556,755	09/17/96	Murphy			
	4.	5,607,846	03/04/97	Murphy, et al.			
	5.	5,712,118	1/98	Murphy, T.F.			
	6.	5,725,862	3/98	Murphy, T.F.			
KSS	7.	6,207,157	3/01	Gu, et al.			

FOREIGN PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION
							YES NO
KSS	8.	98/53851	12/03/98	WO			

EXAMINER INITIAL	OTHER DOCUMENTS (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)	
KSS	9.	Ahmed, K., et al. (1991) Possible presence of a capsule in <i>Branhamella catarrhalis</i> . <i>Microbiol. Immunol.</i> 35: 361-366
	10.	Alaeus, A., et al. (1991) <i>Branhamella catarrhalis</i> septicemia in an immunocompetent adult. <i>Scand. J. Infect. Dis</i> 23: 115-116
	11.	Barenkamp, S.J. (1996) Immunization with high-molecular-weight adhesion proteins of nontypeable <i>Haemophilus influenzae</i> modifies experimental otitis media in chinchillas. <i>Infect. Immun.</i> 64: 1246-1251
	12.	Bhushan, R., et al. (1994) Molecular cloning and characterization of outer membrane protein E of <i>Moraxella</i> (<i>Branhamella</i>) <i>catarrhalis</i> . <i>J. Bacteriol.</i> 176:6636-6643
	13.	Blueston, C.D. (1986) Otitis media and sinusitis in children. Role of <i>Branhamella catarrhalis</i> . <i>Drugs 31 (Suppl. 3)</i> : 132-141
	14.	Boyle, F.M., et al., (1991) Branhamella (<i>Moraxella</i>) <i>catarrhalis</i> : pathogenic significance in respiratory infections. <i>Med. J. Aust.</i> 154:592-596
	15.	Campagnari et al. (1990) Lipooligosaccharide epitopes shared among Gram- negative non-enteric mucosal pathogens. <i>Microbial Pathogenesis</i> 8:353-362
	16.	Campagnari, A.A., et al., (1994) Growth of <i>Moraxella catarrhalis</i> with human transferrin and lactoferrin: expression of iron-repressible proteins without siderophore production. <i>Infect. Immun.</i> 62:4909-4914
	17.	Callin, B.W. (1990) <i>Branhamella catarrhalis</i> : an organism gaining respect as a pathogen. <i>Clin. Microbiol. Rev.</i> 3:293-320
	18.	Chapman, A.J., Jr., et al. (1985) Development of bactericidal antibody during <i>Branhamella catarrhalis</i> infection. <i>J. Infect. Dis.</i> 151:878-882
	19.	Chen, D. et al. (1996) Evaluation of Purified UspA from <i>Moraxella</i> (<i>Branhamella</i>) <i>catarrhalis</i> as a Vaccine in a Murine Model after Active Immunization <i>Infection and Immunity</i> , 64(6): 1900-1905
	20.	Christensen, J.J., et al., (1996) Serum antibody response to outer membrane proteins of <i>Moraxella</i> (<i>Branhamella</i>) <i>catarrhalis</i> in patients with bronchopulmonary infection. <i>Clin. diagn. Lab. Immunol.</i> 3:717-721
KSS	21.	Cohen, D., et al. (1997) Double-blind vaccine-controlled randomised efficacy trial of an investigational <i>Shigella sonnei</i> conjugate vaccine in young adults. <i>Lancet</i> 340:155-159

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JCS	22. Doern, G.V. (1986) <i>Branhamella catarrhalis</i> - an emerging human pathogen. <i>Diagn. Microbiol. Infect. Dis.</i> 4: 191-201		
	23. Doyle, W.J. (1989) Animal models of otitis media: other pathogens. <i>Pediatr. Infect. Dis. J.</i> 8:Suppl. 45-47		
	24. Edebrink, P., et al. (1994) Structural studies of the O-polysaccharide from the lipopolysaccharide of <i>Moraxella (Branhamella) catarrhalis</i> serotype A (strain ATCC 25238). <i>Carbohydr. Res.</i> 257:269-284		
	25. Edebrink, P., et al. (1995) Structural studies of the O-antigen oligosaccharides from two strains of <i>Moraxella catarrhalis</i> serotype C. <i>Carbohydr. Res.</i> 266:237-261		
	26. Edebrink, P., et al. (1996) The structures of oligosaccharides isolated from the lipopolysaccharide of <i>Moraxella catarrhalis</i> serotype B, strain CCUG 3292. <i>Carbohydr. Res.</i> 295: 127-146		
	27. Ejlerksen, T., et al. (1994) <i>Branhamella catarrhalis</i> in children and adults. A study of prevalence, time of colonisation, and association with upper and lower respiratory tract infections. <i>J. Infect.</i> 29:23-31		
	28. Eliasson, I. (1986) Serological identification of <i>Branhamella catarrhalis</i> . Serological evidence for infection. <i>Drugs</i> 31(Suppl. 3):7-10		
	29. Enright, M.C., et al. (1997) <i>Moraxella (Branhamella) catarrhalis</i> -clinical and molecular aspects of a rediscovered pathogen. <i>J. Med. Micro-biol.</i> 46:360-371.		
	30. Erwin, et al. (1991) Enzymatically Deacylated <i>Neisseria</i> Lipopolysaccharide (LPS) Inhibits Murine Splenocyte Mitogenesis Induced by LPS, <i>Infection and Immunity</i> 59(6): 1881-1887		
	31. Faden, H., et al. (1994) Epidemiology of <i>Moraxella catarrhalis</i> in children during the first 2 years of life: relationship to otitis media. <i>J. Infect. Dis.</i> 169:1312-1317		
	32. Formsgaard, J. S., et al. (1991) Comparative immunochemistry of lipopolysaccharides from <i>Branhamella catarrhalis</i> strains. <i>Infect. Immun.</i> 59:3346-3349		
	33. Fung, C.P., et al. (1992) The antimicrobial susceptibility of <i>Moraxella catarrhalis</i> isolated in England and Scotland in 1991. <i>J. Antimicrob. Chemother.</i> 30:47-55		
	34. Goldblatt, D., et al. (1990) <i>Branhamella catarrhalis</i> : antigenic determinants and the development of the IgG subclass response in childhood. <i>J. Infect. Dis.</i> 162:1128-1135		
	35. Green, B.A., et al. (1994) Nontype <i>Haemophilus influenzae</i> Lipo-oligosaccharide Conjugates as Vaccine Candidates against NTHi, p. 125-129. In E. Norby, F. Brown, R.M. Chanock, and H.S. Ginsberg (ed), <i>Vaccines 94</i> . Cold Spring Harbor Laboratory Press, Plainview, N.Y.		
	36. Gu, X.-X., et al. (1993) Preparation, Characterization and Immunogenicity of Meningococcal Lipooligosaccharide-Derived Oligosaccharide-Protein Conjugates. <i>Infect. Immun.</i> 61(5):1873-1880		
	37. Gu, X.-X., et al. (1995) Quantitation and Biological Properties of Released and Cell-Bound Lipooligosaccharide from Nontypeable <i>Haemophilus influenzae</i> . <i>Infect. Immun.</i> 63(10): 4115-4120		
	38. Gu, X.-X., et al. (1996) Synthesis, characterization, and immunological properties of detoxified lipooligosaccharide from nontypeable <i>Haemophilus influenzae</i> conjugated to proteins. <i>Infect. Immun.</i> 64:4047-4053.		
	39. Gu, X.-X., et al. (1997) Detoxified lipooligosaccharide from nontypeable <i>Haemophilus influenzae</i> conjugated to proteins confers protection against otitis media in chinchillas. <i>Infect. Immun.</i> 65:4488-4493		
	40. Gu, X.-X., et al. (1998) Synthesis and Characterization of Lipooligosaccharide-Based Conjugates as Vaccine Candidates for <i>Moraxella (Branhamella) catarrhalis</i> . <i>Infect. Immun.</i> 66:1891-1897		
	41. Gupta, et al. (1992) Synthesis, Characterization, and Some Immunological Properties of Conjugates Composed of the detoxified Lipopolysaccharide of <i>Vibrio cholerae</i> O1 Serotype Inaba Bound to Cholera Toxin. <i>Infection and Immunity</i> 60(8):3201-3208		
	42. Gupta, et al. (1995) Comparative Immunogenicity of Conjugates Composed of <i>Escherichia coli</i> O111 O-Specific Polysaccharide, Prepared by Treatment with Acetic Acid or Hydrazine, Bound to Tetanus Toxoid by Two Synthetic Schemes. <i>Infection and Immunity</i> 63(8):2805-2810		
	43. Helminen, M.E., et al. (1993) A major outer membrane protein of <i>Moraxella catarrhalis</i> is a target for antibodies that enhance pulmonary clearance of the pathogen in an animal model. <i>Infect. Immun.</i> 61:2003-2010		
	44. Helminen, M.E., et al. (1994) A large, antigenically conserved protein on the surface of <i>Moraxella catarrhalis</i> is a target for protective antibodies. <i>J. Infect. Dis.</i> 170:867-872		
	45. Hochstein, H.D., et al. (1973) Further developments of Limulus amebocyte lysate test. <i>Bull. Paraenter.</i> <i>Drug Assoc.</i> 27:139-148		
	46. Hu, W.-G., et al. (2000) Enhancement of Clearance of Bacteria from Murine Lungs by Immunization with Detoxified Lipooligosaccharide from <i>Moraxella catarrhalis</i> Conjugated to Proteins. <i>Infect. Immun.</i> 68:4980-4985		
KSI	47. Jennings, H.J., et al. (1984) Conjugation of meningococcal Lipopolysaccharide R-type oligosaccharides to tetanus toxoid as route to a potential vaccine against group B <i>Neisseria meningitidis</i> . <i>Infect. Immun.</i> 43:407-412		

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C.SS	48. Kelly, J., et al. (1996) Separation and Characterization of O-Deacylated Lipooligosaccharides and Glycans Derived from <i>Moraxella catarrhalis</i> Using Capillary Electrophoresis-electrospray Mass Spectrometry and Tandem Mass Spectrometry. <i>Analy. Biochem.</i> 233:15-30		
	49. Kemp, H.A., et al. (1986) Studies on the detrimental effects of bivalent binding in a microtitre plate ELISA and possible remedies. <i>J. Immunol. Methods</i> 94:65-72		
	50. Konadu, et al. (1994) Preparation, Characterization, and Immunological Properties in Mice of <i>Escherichia coli</i> O157 O-Specific Polysaccharide-Protein Conjugate Vaccines. <i>Infection and Immunology</i> 62(11):5048-5054		
	51. Konadu, et al. (1996) Synthesis, Characterization, and Immunological Properties in Mice of Conjugates Composed of Detoxified Lipopolysaccharide of <i>Salmonella paratyphi A</i> Bound to Tetanus Toxoid, with Emphasis on the Role of O Acetyl. <i>Infection and Immunity</i> 64(7):2709-2715		
	52. Marrs, C.F., et al. (1990) Pili (fimbriae) of <i>Branhamella</i> species. <i>Am. J. Med.</i> 88(Suppl. 5A):36S-40S		
	53. Masoud, H., et al. (1994) Characterization of the lipopolysaccharide of <i>Moraxella catarrhalis</i> . Structural analysis of the lipid A from <i>M. catarrhalis</i> serotype A lipopolysaccharide. <i>Eur. J. Biochem.</i> 220:209-216		
	54. Masoud, H., et al. (1994) Structural elucidation of the backbone oligosaccharide for the lipopolysaccharide of <i>Moraxella catarrhalis</i> serotype A. <i>Can. J. Chem.</i> 72:1466-1477		
	55. McLeod, D.T., et al. (1986) Increase in bronchopulmonary infection due to <i>Branhamella catarrhalis</i> . <i>Br. Med. J.</i> 292:1103-1105		
	56. Murphy, T.F. (1996) <i>Branhamella catarrhalis</i> : epidemiology, surface antigenic structure, and immune response. <i>Microbiol. Rev.</i> 60:267-279		
	57. Murphy, T.F., et al. (1993) The major heat-modifiable outer membrane protein CD is highly conserved among strains of <i>Branhamella catarrhalis</i> . <i>Mol. Microbiol.</i> 10:87-97		
	58. Nicotra, B., et al. (1986) <i>Branhamella catarrhalis</i> as a lower respiratory tract pathogen in patients with chronic lung disease. <i>Arch. Intern. Med.</i> 146:890-893		
	59. Polotsky, et al. (1994) Comparison of Conjugates Composed of Lipopolysaccharide from <i>Shigella flexneri</i> Type 2a Detoxified by Two Methods and Bound to Tetanus Toxoid. <i>Infection and Immunity</i> 62(1):210-214		
	60. Rahman, M., et al. (1995) Lack of serotype-specific antibody response to lipopolysaccharide antigens of <i>Moraxella catarrhalis</i> during lower respiratory tract infection. <i>Eur. J. Clin. Microbiol. Infect. Dis.</i> 14:297-304		
	61. Rahman, M., et al. (1997) Human immunoglobulin isotype and IgG subclass response to different antigens of <i>Moraxella catarrhalis</i> . <i>APMIS</i> 105:213-220		
	62. Robbins, J.B., et al. (1990) Polysaccharide-protein conjugates: a new generation of vaccines. <i>J. Infect. Dis.</i> 161:821-832		
	63. Robbins, J.B., et al. (1995) Perspective: hypothesis: serum IgG antibody is sufficient to confer protection against infectious diseases by inactivating the inoculum. <i>J. Infect. Dis.</i> 171:1387-1398		
	64. Sarubbi, F.A., et al. (1990) Respiratory infections caused by <i>Branhamella catarrhalis</i> . Selected epidemiologic features. <i>Am. J. Med.</i> 88 Suppl 5A:9S-14S		
	65. Smith, P.K., et al. (1985) Measurement of protein using bicinchoninic acid. <i>Anal. Biochem.</i> 150:76-85		
	66. Svenson, S.B., et al. (1981) Artificial <i>Salmonella</i> vaccines: <i>Salmonella typhimurium</i> O-antigen-specific oligosaccharide-protein conjugates elicit protective antibodies in rabbits and mice. <i>Infect. Immun.</i> 32:490-496.		
	67. Tsai, C.M., et al. (1982) A sensitive silver stain for detecting lipopolysaccharides in polyacrylamide gels. <i>Anal. Biochem.</i> 119:155-119		
	68. Vaneechoutte, M., et al. (1990) Respiratory tract carrier rates of <i>Moraxella</i> (<i>Branhamella</i>) <i>catarrhalis</i> in adults and children and interpretation of the isolation of <i>M. catarrhalis</i> from sputum. <i>J. Clin. Microbiol.</i> 28:2674-2680		
	69. Vaneechoutte, M., et al. (1990) Serological Typing of <i>Branhamella catarrhalis</i> strains on the basis of lipopolysaccharide antigens. <i>J. Clin. Microbiol.</i> 28:182-187		
	70. Verheul, A.F.M., et al. (1991) Preparation, characterization, and immunogenicity of meningococcal immunotype L2 and L3,7,9, phosphoethanolamide group-containing oligosaccharide-protein conjugates. <i>Infect. Immun.</i> 59:843-851		
	71. W.H.O. Expert Committee on Biological Standardization (1991) Requirements for <i>Haemophilus</i> type b conjugate vaccines. <i>WHO Tech. Rep. Ser.</i> 814:15-37		
	72. Wagner, D.K., et al. (1987) Analysis of immunoglobulin G antibody responses after administration of live and inactively influenza A vaccine indicates that nasal wash immunoglobulin G is a transudate from serum. <i>J. Clin. Microbiol.</i> 25:559-562		
	73. Yang, Y.P., et al. (1997) The major outer membrane protein, CD, extracted from <i>Moraxella</i> (<i>Branhamella</i>) <i>catarrhalis</i> is a potential vaccine antigen that induces bactericidal antibodies. <i>FEMS Immunol. Med. Microbiol.</i> 17:187-199		
C.SS	74. Zollinger, W.D., et al. (1983) Importance of complement source in bactericidal activity of human and murine monoclonal antibody to meningococcal group B polysaccharide. <i>Infect. Immun.</i> 40:257-264		

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